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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,697	09/19/2005	Takahiko Kimura	1247-0538PUS1	9554

2292 7590 02/25/2008

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EXAMINER	
BLACKSHIRE, DAVID A	

ART UNIT	PAPER NUMBER
2852	

NOTIFICATION DATE	DELIVERY MODE
02/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/549,697	KIMURA ET AL.	
	Examiner	Art Unit	
	DAVID A. BLACKSHIRE	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 14-17* is/are rejected.

7)☒ Claim(s) *6-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 September 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/19/05, 12/19/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 6-13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 6-13 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Koshino et al. (5539502).

4. Regarding claim 1, Koshino et al. disclose a remaining amount of toner detecting apparatus which detects a remaining amount of toner stored in a housing [D] [Fig. 1] for storage of toner, the remaining amount of toner detecting apparatus comprising: a detection auxiliary member [18a] disposed in the housing [D]; a holding member [13a] which is flexible and has one end connected to an outer periphery of a stirring member [12a] which is rotated to stir the toner in the housing, and another end at which the detection auxiliary member [18a] is held; detecting means [14] disposed near the lower portion of the housing [D], for detecting a distance from the detecting means [14] to the detection auxiliary member [18a] when the detection auxiliary member [18a] is moved

by rotation of the stirring member [12a] and passes through a detection position; and calculating means for calculating the remaining amount of the toner based on the distance from the detecting means [14] to the detection auxiliary member [18a] [col. 2, lines 17-22].

5. Regarding claim 2, Koshino et al. disclose the remaining amount of toner detecting apparatus of claim 1, wherein the detection auxiliary member [18a] passes through a predetermined detection position, and thereby a magnetic field in the detection position is changed; and the detecting means [14] detects the distance to the detection auxiliary member [18a] based on the change of the magnetic field in the detection position by the detection auxiliary member [18a] [col. 11, lines 3-5 disclose how film 18a can be replaced by a springy metal such as a thin plate of phosphor bronze, which is a good conductor].

6. Regarding claim 3, Koshino et al. disclose the remaining amount of toner detecting apparatus of claim 2, wherein the detection auxiliary member [18a] is made of a material having electrical conductivity [col. 11, lines 3-5 disclose how film 18a can be replaced by a springy metal such as a thin plate of phosphor bronze, which is a good conductor].

7. Regarding claim 4, Koshino et al. disclose the remaining amount of toner detecting apparatus of claim 2, wherein the detection auxiliary member [18a] is made of a material having magnetism [col. 11, lines 3-5 disclose how film 18a can be replaced by a springy metal; an example of a springy metal is stainless steel and depending on the alloy is composed, stainless steel can have magnetic properties].

8. Regarding claim 5, Koshino et al. disclose the remaining amount of toner detecting apparatus of any one of claims 1 to 4, wherein the length between both ends of the holding member is equal to or less than one half of the circumference of a circle whose radius is the distance from the rotation center of the stirring member to the outer periphery [See Fig. 1].

9. Regarding claim 14, Koshino et al. disclose a toner cartridge installed in an image forming apparatus so as to be attached thereto and detached therefrom, the toner cartridge comprising: a housing [D] for storage of toner; a stirring member [12a] disposed in the housing [D] so as to rotate and stir thereby the toner in the housing [D]; a detection auxiliary member [18a] disposed in the housing [D]; and a holding member [13a] which is flexible and has one end connected to the outer periphery of the stirring member [12a] and another end at which the detection auxiliary member [18a] is held.

10. Regarding claim 15, Koshino et al. disclose the toner cartridge of claim 14, wherein the lower portion of the housing [D] is formed into a curved shape which is convex down with respect to the movement direction of the outer periphery of the stirring member [12a] [See Fig. 1].

11. Regarding claim 16, Koshino et al. disclose an image forming apparatus comprising: a housing [D] in which toner is stored; a stirring member [12a] which is disposed in the housing [D] so as to be capable of rotating and stirs the toner in the housing [D] by rotating; and a remaining amount of toner detecting apparatus comprising: a detection auxiliary member [18a] disposed in the housing [D]; a holding member [13a] which is flexible, one end of which is connected to the outer periphery of

the stirring member [12a], and the other end of which holds the detection auxiliary member [18a]; detecting means [14] disposed near the lower portion of the housing, for detecting the distance to the detection auxiliary member [18a] when the detection auxiliary member [18a] is moved by rotation of the stirring member [12a] and passes through a detection position; and calculating means for calculating the remaining amount of the toner based on the distance from the detecting means [14] to the detection auxiliary member [18a] [col. 2, lines 17-22].

12. Regarding claim 17, Koshino et al. disclose an image forming apparatus comprising: an image forming apparatus main unit; and a toner cartridge installed in the image forming apparatus main unit so as to be attached thereto and detached therefrom, the toner cartridge comprising: a housing [D] in which toner is stored; a stirring member [12a] which is disposed in the housing [D] so as to rotate and stir the toner in the housing [D]; a detection auxiliary member [18a] disposed in the housing [D]; and a holding member [13a] which is flexible and has one end connected to the outer periphery of the stirring member [12a], and another end at which the detection auxiliary member [18a] is held, wherein the image forming apparatus main unit includes: detecting means [14] disposed near the lower portion of the housing [D], for detecting the distance to the detection auxiliary member [18a] when the detection auxiliary member [18a] is moved by rotation of the stirring member [12a] and passes through a detection position; and calculating means for calculating the remaining amount of the toner based on the distance from the detecting means [14] to the detection auxiliary member [18a] [col. 2, lines 17-22].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID A. BLACKSHIRE whose telephone number is (571)272-1392. The examiner can normally be reached on Monday through Friday, from 9:00 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David M Gray/
Supervisory Patent Examiner, Art Unit 2852

DAB
/David A Blackshire/
Examiner, Art Unit 2852